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STANDARD FORM NO. 64 Pacific Northwest Forest and Range Experiment Station
Post Office Box 4059 Portland 8, Oregon

# *Office Memorandum* • UNITED STATES GOVERNMENT

TO : Files DATE: April 24, 1957

FROM : G. M. Thomas

SUBJECT: RX-NW SUPERVISION, Field trip to investigate the overwintering stages of Pseudohylesinus Beetles in Pacific Silver Fir.

On March 19, 1957, Norm Johnson, entomologist for Weyerhaeuser Timber Company and I visited an area of chermes-infested Pacific silver fir on Weyerhaeuser land in the Green River drainage in southern Washington. Investigations were conducted on two sites, one of northern exposure, and the other of southern exposure. The results of the investigations were the same for both sites.

My main objectives were to investigate (1) the overwintering stages of Pseudohylesinus granulatus and P. grandis, (2) the progress of Pseudohylesinus attacks on chermes-infested trees, and (3) to determine if adult beetles have yet been active this year. Following are the results of these investigations.

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Examinations of standing and down silver fir trees showed that both P. grandis and P. granulatus overwintered as adults and larvae. Overwintering adults of both species were found in niches in the bark--P. granulatus from ground level to 3 feet above ground, and P. grandis about 5 feet above ground and higher. Investigations were not made below ground level, nor above 7 feet; however, boring dust visible in bark crevices above 7 feet indicated the presence of adults higher than it was possible to investigate. It was noted that niches in the bark were more abundant than adult beetles, indicating that some adults might have emerged. However, a search for new attacks disclosed nothing, showing that the beetles had not yet been active. An abundance of overwintering niches, then, is not an indication of a large beetle population.

Mature larvae of both P. grandis and P. granulatus were found in both standing and down trees. Larvae of P. granulatus were found in pupal cells in the bark on the lower boles of the trees. P. grandis larvae were found in pupal cells in the bark, where the bark was thick; in pupal cells in the wood where the bark was thin, (upper bole and branches); and in larval mines throughout the length of the tree. No pupae were found of either species.

Chermes-infested silver fir trees were examined for attacks by Pseudohylesinus beetles. Successful attacks containing mature larvae of P. granulatus were found around the bases of standing, dead trees. Successful attacks by P. grandis were also found on the same trees about 4 feet above the ground and higher. It is unknow whether the trees were killed by chermes or bark beetle attacks. Successful attacks by P. grandis were also found in the upper boles of chermes-killed silver fir trees felled in 1956.

G. M. T.